BY ORDER OF THE COMMANDER
35TH FIGHTER WING

35TH FIGHTER WING INSTRUCTION
13-203

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RANGE OPERATIONS
AND MAINTENANCE

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SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed.

1. General Information

1.1. **Introduction:** R-130 (Draughon Range) and associated airspace is a Class A, joint use air-to-ground training range, located 10 NM north of Misawa Air Base. This supplement contains information and directives applicable to Draughon Range. It describes user and support responsibilities, scheduling procedures, boundaries, restrictions, and operating procedures for the range.

1.2. **Range Responsibilities:**

1.2.1. Operational control of Draughon Range is exercised by 35 OG/CC and implemented by 35th Operations Support Squadron (35 OSS) as the USAF Range Operating Agency (ROA) for Draughon Range (R-130).

1.2.2. 35th Operations Support Squadron flight scheduling section (35 OSS/OSOS) is responsible for scheduling range periods for United States Forces Japan (USFJ) and for coordinating use by Japan Air Self Defense Force (JASDF).

1.2.3. Draughon Range Operations and Management (35 OSS/OSOR) is provided by civilian contractor. The contractor is responsible for the accomplishment of range operations, maintenance and complying with established agreements regarding Draughon Range. Range Operations Officer (ROO)/Quality Assurance Evaluation (QAE) is provided by 35 OSS Current Operations (35 OSS/OSO) with oversight from 35th Operations Support Squadron Commander (35 OSS/CC).

1.2.4. 35 OSS/OSOR, in accordance with (IAW) AFI 91-207, *The US Air Force Traffic Safety Program,* establishes a vehicle training program for range personnel required to use any special purpose vehicles including all terrain vehicles (ATVs) and snowmobiles. 35th Fighter Wing Safety (35 FW/SE) reviews and approves this program as required.

1.2.5. 35th Civil Engineer Squadron Explosive Ordnance Disposal (EOD, 35 CES/CED) is responsible for range decontamination, clearance, and munitions disposal.

1.2.6. Fire fighting capabilities and prevention:

1.2.6.1. Draughon Range has limited fire fighting capability.

1.2.6.2. Draughon Range Control Officer (RCO) will cease all operations, call the Misawa fire department, and coordinate first responder personnel (including JASDF) to contain/extinguish any unplanned or uncontrolled fires.

1.3. **Target Area Maintenance, Decontamination, and Clearance:**

1.3.1. Definition of Terms.

1.3.1.1. Target area maintenance. The term maintenance includes target construction, repair, or replacement as well as target area decontamination, clearance, and ammunition disposal. Decontamination and clearance are defined as follows:

1.3.1.1.1. Decontamination. The inspection, rendering safe, removal, and destruction of dud/fired munitions from clearance zones specified in AFI 13-212.

1.3.1.1.2. Clearance. The policing of target debris and ordnance declared and/or marked safe by EOD personnel with subsequent transport to a designated disposal area.

1.3.2. Target Area Maintenance.

1.3.2.1. Draughon Range will be closed for conventional use, and emitters located on the range property will not emanate, while decontamination and clearance operations are being actively conducted. Range personnel will request Airfield Management (35 OSS/OSAM) transmit an appropriate notice to airmen (NOTAM) and local advisories a minimum of 3 days prior to closures for decontamination/clearance operations. On the day(s) of closure, range personnel will contact Radar Approach Control (RAPCON) to issue over-fly restrictions as necessary. When the range is operational, the RCO must approve any target or target area maintenance.

1.3.2.2. All range closures for maintenance or equipment outage will be coordinated through 35 OSS/OSOS, Naval Air Facility (NAF) Misawa Liaison and 3rd AW (JASDF).

1.3.3. Decontamination clearance plans will be scheduled and approved by 35 OSS/CC in coordination with 35 OSS/OSOS, 13 FS, 14 FS, 3rd AW, NAF Liaison, and EOD. 35 OSS/OSOR will publish a decontamination clearance plan annually by 15 September for the upcoming 12-month period. The following organizations will provide support required to accommodate range decontamination clearance in an efficient and safe manner. Each organization will be responsible for establishing procedures which will assure proper and timely support for flying training operations. A complete and signed decontamination plan will be forwarded to all coordinating and executing agencies.

1.3.3.1. 35 OSS/OSOR will:

1.3.3.1.1. Coordinate with 35 OSS/OSOS, NAF Liaison, 3rd AW, EOD, 35th Medical Group (35 AMDS/SGPF), 35 FW/SE, 35th Fighter Wing Public Affairs (35 FW/PA) and any other required agencies concerning the scheduled range decontamination.

1.3.3.1.2. Oversee planning and scheduling of range decontamination clearance.

1.3.3.1.3. Coordinate with EOD for collection and disposal of range residue IAW applicable directives.

1.3.3.1.4. Monitor range conditions to determine decontamination clearance requirements and conditions requiring special attention.

1.3.3.2. 35 OSS/CC will:

1.3.3.2.1. Approve all decontamination clearance plans.

1.3.3.2.2. Advise 35th Operations Group Commander (35 OG/CC) and outside units of specific operational range restrictions and dates through 35 OSS/OSOS.

1.3.3.3. 35th Maintenance Group Commander (35 MXG/CC) will:

1.3.3.3.1. Provide maintenance support in accordance with the terms and conditions of the Operations and Maintenance of Draughon Range contract.

1.3.3.4. 35 CES/CED (EOD) will:

1.3.3.4.1. Provide qualified personnel to clear explosive hazards and inspect and dispose of all ordnance found on Draughon Range.

1.3.3.4.2. Provide safety briefings for RCOs, range personnel, visitors, and all personnel involved in decontamination clearance operations as required.

1.3.3.4.3. Provide a copy of decontamination clearance report to include total tons removed, total acres cleared, number/hours of EOD personnel used, number/hours of non-EOD personnel used, and munitions cleared (type, number cleared, number of duds) to 35 OSS/OSOR as input for the Annual Range Activity Report.

1.4. **Weapons Range Supervision:** Operational control of Draughon Range is exercised by 35 OG/CC. The contractor's support of normal and exercise operations is performed under the operational direction of 35 OSS/CC. The ROO/QAE is responsible for evaluating and reporting contractor performance. The Contracting Officer (CO) ensures the contract is administered in accordance with applicable regulations and issues any modifications to the contract while the Contracting Administrator (CA) oversees the ROO/QAE surveillance effort. Range Manager duties include, but are not limited to:

1.4.1. The authority to contractually and financially obligate the contractor's company, and to make and implement all decisions regarding the performance of the range contract.

1.4.2. Coordinate range flying operations, procedures, and management with ROO/QAE, Mission Support Group agencies, and all users IAW this instruction.

1.5. **Photographic Support:** 35 FW/PA will provide photographic support for all 35 FW range operations as required. Duties include processing and developing range photos. PA will also provide necessary notifications to the public when applicable.

1.6. **Weather Support:** 35 OSS Weather Flight (OSW) provides weather forecasting support. Draughon Range personnel will be trained to provide limited observation reports to the Weather Flight.

1.7. **Range Access/Inspections:**

1.7.1. Unescorted/Escorted:

1.7.1.1. All personnel within Draughon Range area will have 2-way communication radios at all times.

1.7.1.2. Escorted personnel are required to be briefed on range safety/security and must be accompanied by range personnel. Escorted personnel will not enter the 20MM HEI target at any time unless directly briefed/escorted by a qualified EOD technician.

1.7.1.3. Unescorted personnel are required to be briefed on range safety/security by range personnel and must receive an EOD briefing annually. 35 OSS/OSOR will keep records of all unescorted personnel EOD briefing dates. Unescorted personnel will not enter the 20MM HEI target at any time unless directly escorted by a qualified EOD technician.

1.7.2. Inspections: All Misawa Air Base agencies having a need to inspect Draughon Range will notify the QAE no later than 72 hours prior to the proposed visit. This is to avoid conflicting visits and to ensure an escort is available. Confidentiality of no-notice "trusted agent" visits will be respected.

1.7.3. Range Access: Visitor access to Draughon Range will be limited to official business only. All personnel are required to notify 35 OSS/OSOS prior to being granted access. Visits will be coordinated through the QAE (226-3841) at least 72 hours prior to visit. All military and civilian personnel will be properly identified before access is granted. Visitors must be escorted/supervised by range personnel at all times.

1.7.3.1. Range visitation and access by any persons who are neither US military/civilian personnel nor Japanese military/civilian personnel require GoJ notification in advance of entry. Notification should be made via 35 OSS/OSOS and QAE NLT 30 days in advance. As an absolute minimum in unforeseen circumstances, a 10-day prior notification of GoJ is required.

2. R-130 Air-To-Ground and M203 Training Range

2.1. **General:** R-130 (Draughon Range) and associated airspace is a Class A, joint use air-to-ground training range, located 10 NM north of Misawa Air Base. The land area is approximately 1900 acre semi-circle, one statute mile in radius, from a focal point at N4051.146/E14123.034 (WGS-84). The entire eastern edge of Draughon Range borders the Pacific Ocean. The northern sea area boundary is a line drawn 058 degrees true from the northern tip of the land area. The southern sea area boundary is a line drawn 108 degrees true from the southern tip of the land area. Draughon extends to the east by a 5 statute mile arc from the focal point (See Attachment 1).

2.2. **Range Configuration** (See Attachment 3.1): Range configuration is updated as required for local training use. Updates to the current range configuration, locations, and Weapons Danger Zone (WDZ) data can be obtained through 35 OSS/OSK (DSN 226-3187).

2.2.1. Range Towers: North flank tower (N4052.887/E14123.330), located NE of main tower, will not be manned by contractor personnel when winds are 30 knots steady state

or gusting at 35 knots or greater. Also, manual scores cannot be given under this condition. The main control tower (N4052.083/E14122.745) is rated at 66 knots.

2.2.2. Conventional Target: Consists of a bulls eye with concentric circles at 75 feet (22.86 meters) and 150 feet (45.72 meters) centered on the target (normally a shipping container, sea box, or conex van). It is located 4,030 feet (1228.34 meters) east/northeast of the main tower. Target coordinates are N 4052.271 E 14123.596 (WGS-84), elevation is approximately 16 feet. Due to accidental 20MM HEI firing on this target, it is a danger zone requiring additional safety measures by EOD. Reference Attachment 8, Proposed Procedures for Scraping Conventional Target, dated 28 June 2010, for more information. Also reference Attachment 9, Risk Assessment for Draughon Range, dated 21 June 2010.

2.2.3. 20MM HEI UXO Target: Consists of two orange sea containers aligned next to each other. The target is for High Angle Strafe with HEI ammunition only. Low angle strafe is not authorized on this target. Target coordinates are N4052.504 & E14123.469. Current target location prevents EOD from conducting decontamination procedures. Unexploded 20MM HEI remain in the danger zone and ORM dictates only qualified EOD technicians or personnel escorted by EOD enter the target area. Reference Attachment 9, Risk Assessment for Draughon Range, dated 21 June 2010, for more information.

2.2.4. JASDF (Rocket) Target: Located northeast of the conventional target. US forces are not authorized to employ any type of munitions on the JASDF target.

2.2.5. Low/High Angle Strafe (LAS/HAS) Targets: Panels 1 and 2 are designated for low angle strafe. Panel 4 is designated for high angle strafe only. Panel 3 is not used. All strafe panels have a 2,000' foul line, identified by a line of orange barrels abeam the main tower. Strafe panels will not be available when steady state winds are greater than 20 knots or gusting greater than 25 knots.

2.2.6. Tactical Targets: Trucks, conex vans, simulated anti-aircraft guns, tracking devices, and aircraft comprise the tactical target area east of the strafe targets. Contact 35 OSS/OSK for current range configuration and coordinates.

2.2.6.1. High angle strafe is permitted on the center tactical targets, but electronic scoring is not available. RCOs will give general information based on visual impact. The puppy paws will not be targeted for strafe.

2.2.6.2. LAS is permitted on the tactical target array only from dry passes under flight lead control. Soil surrounding the tactical target array is not maintained appropriately for any hot LAS; ricochets from hot passes on the tactical target array could impact the delivering aircraft. This restriction does not apply to helicopter gun employment; helicopters may employ hot gun passes from low angle on the tactical target array in accordance with restrictions in Para. 2.8.3.2.

2.2.7. Electronic Combat Range Equipment. A RWR light emitter is also located in the mobile van.

2.2.7.1. RWR Light: The RWR light is a 9 GHz emitter.

2.3. **Range Restrictions** (see Attachment 2 and Attachment 4): Pilots will use the most restrictive range procedures, weather minimums, and emergency procedures found in flight regulations and range regulations for the aircraft employing on Draughon Range.

2.3.1. Airspace: Draughon Range is located within the Misawa Positive Control Area (PCA) (2,000'AGL to FL230, bounded by coordinates N4059.17, E14107.28; N4059.17, E14120.78; N4053.17, E14129.78, N4051.08, E14130.00; N4049.17, E14124.78; N4049.17, E14107.28; to beginning. See Attachment 4). Misawa Approach Control or Sapporo Area Control Center must clear flights into the PCA. R-130 (with Misawa PCA) is available from the surface to 20,000 feet MSL during scheduled range periods. Airspace to 23,000 feet is available on request through Sapporo Area Control Center (UHF 279.2/VHF 119.3); pilots must request the airspace to 23,000 from Sapporo Area Control Center.

2.3.1.1. Aircraft must be cleared into the Draughon PCA through RAPCON. Aircraft must be cleared into Draughon Range airspace (R-130) by the RCO.

2.3.2. Danger Areas (See Attachment 2): Danger areas extend from the northern sea boundary to the southern sea boundary in a 2-mile arc for training rounds (e.g. BDU-33) and a 3-mile arc for inert heavy-weight ordnance. Boats and other watercraft are advised to avoid these areas when Draughon is "Hot." Pilots will not drop ordnance on Draughon when boats or other watercraft are within the described danger area arcs, however, dry passes are authorized.

2.3.3. No-Fly Areas (See Attachment 4): Over flight of the Draughon Range main tower (N4052.42/E14123.39), north flank tower (N4052.43/E14123.33), and the Rokkasho nuclear power plant north of Draughon Range (N4058.5/E14121.0) is prohibited. The blue-roofed farms to the west of Draughon Range (N4054.08/E14119.03) and the piers to the northeast of the target (N4055.56/E14123.76) may not be overflown at low altitude.

2.3.4. Deliveries: All Deliveries will be IAW Attachment 3.2. Loft and toss deliveries are limited to +10 degrees nose high when "Hot" on Draughon Range. Weapons should be armed "Hot" over water when possible. All ordnance must be released to impact within the range boundary. First run attacks are authorized given the flight has previously coordinated with the RCO, is in radio contact with the RCO, and no boats or watercraft are in the danger area. Dry passes and simulated attacks may be accomplished from any attack axis provided they do not overfly the no-fly areas.

2.3.5. Weather:

2.3.5.1. Day Conventional: Ceiling must be 500 feet above the highest portion of the bombing pattern and 3nm of visibility with a discernable horizon. Ordnance will not be dropped or fired through overcast conditions. For dry loft/toss deliveries, pull-up through overcast conditions is prohibited. Local Misawa altimeter will be used unless updated by Draughon Tower. Helicopter minimums will be IAW weapons system and applicable instructions.

2.3.6. Ordnance And Pyrotechnics Authorized: Authorized ordnance and pyrotechnics include 20mm//5.56mm/7.62mm/50 cal target practice and tracer rounds, rockets equipped with inert warheads or spotting charge, and inert free-fall (i.e. non PGM) bombs not to exceed 2,000 pounds. Chaff and flares are prohibited within the R130 airspace.

Expenditure of heavyweight inert ordnance (MK-82 to MK-84 class ordnance) is only authorized on the tactical target array. Dry passes may be accomplished simulating any munition as long as the munitions are mechanically safe, cannot be released from the aircraft, and that the passes do not overfly no-fly areas. Authorized deliveries will be IAW Attachment 3.2.

2.3.6.1. Any high-drag weapon delivered low-drag must be hard-wired low-drag.

2.3.7. Number of Aircraft: There will be a maximum of four aircraft in the day conventional pattern. With RCO and flight lead coordination, additional aircraft may be in the PCA and/or on Draughon Range and will be positively de-conflicted from each additional flight.

2.4. **Range Holding/Entry:**

2.4.1. Holding (See Attachment 5): Visual Meteorological Conditions (VMC) holding is on the MIS 320/20, left hand turns, 10nm legs at 3500' (over Mutsu Bay north of Noheji). If unable to hold VMC, contact Misawa RAPCON on UHF 317.8 for clearance to hold in IMC with a block altitude.

2.4.2. Deconfliction: In order to de-conflict range entries and departures, entering flights will remain at or below 3000' MSL until "feet dry" inbound (east shore of Mutsu Bay) and westbound departing flights will exit above 4000' MSL. If flights departing the range westbound are unable to climb above 4000' MSL under VMC, they will deconflict their departure with flights holding for range entry on range frequency. Reference Area Planning (AP/3) for complete information on Misawa PCA.

2.4.3. Entry: Clearance must be obtained from the RCO prior to entry onto Draughon Range.

2.4.3.1. Minimum altitude for a spacer pass is 500' AGL. Range entry from the east direct to downwind is permitted, provided no aircraft are on the range. A tactical entry to a hot-delivery on either the conventional or tactical targets requires RCO approval and must be performed under guidance in Para. 2.3.4., as applicable.

2.4.3.2. Helicopters are authorized to enter Draughon Range airspace from any direction. Entry direction will be cleared with the RCO prior to entry to de-conflict with scheduled fixed wing range periods. Helicopters will complete a clearing pass along and over the range boundaries before live fire operations.

2.4.4. Exit: Prior to departing Draughon airspace, pilots must contact Misawa Approach. Once identified by Misawa approach and recovering to Misawa, fly heading 100º (Rwy 28)/ 280º (Rwy 10) prior to switching to Misawa Tower. Use caution for numerous aircraft operating in Misawa's VFR and IFR traffic patterns; downwind for both of these patterns is approximately 5 nautical miles south of the Draughon PCA. Aircraft exiting Draughon Range but not recovering at Misawa should hold in Draughon airspace until Misawa Approach has provided departure/clearance instructions and traffic advisories as necessary.

2.5. **Hours of Operation:** Draughon Range normal operating hours are 0700 to 2000 Monday through Friday (local time). Weekend and U.S. Federal holiday use is by exception

only and requires 35 FW/CC and 35 CONS approval to ensure contractual obligations are not violated.

2.5.1. Extended Hours: Extended hours to 2200 local time during the months of April–September for a maximum of 15 days per month and a maximum total of 60 days over the six month period, are available upon request from 35 OSS/OSOS and must be requested a minimum of 20 days in advance. During extended hours, the range will be open from either: 0800-2100, or 0900-2200. If the range is to be used between 2000 and 2200 local, 35 OSS/OSOS will notify 35 FW/PA, who will then notify the local Defense Facilities Administration Office (DFAO), NLT 15 days in advance of intended use. As an absolute minimum in unforeseen circumstances, a 5-day prior notification of DFAO is required.

2.6. **Scheduling:**

2.6.1. Authority: 35 OSS/OSOS is the only scheduling authority for Draughon Range usage. All ground or airborne use of Draughon Range for training requires at least 48 hours prior notice for approval unless further lead time is required per the guidance in para. 2.5.1.

2.6.2. Requests: 35 FW squadrons should submit their biweekly Draughon Range requests NLT the close of business on the Thursday preceding the upcoming range deconfliction meeting outlined in para 2.6.3.

2.6.3. Deconfliction Meetings: De-confliction meetings occur weekly on Tuesday at 1300 and cover a two week scheduling period. 35 FW squadrons have priority for the first week and JASDF has priority for the second week of each two-week period.

2.6.4. Naval Scheduling: Aircraft departing from aircraft carriers will submit range airspace requests no later than 1200 the day prior to use. Navy and Marine requests for, and changes to, the range schedule will be made through Naval Air Facility Flight Support, then forwarded to 35 OSS/OSOS.

2.6.5. Cancellations: All cancellations must be made at least 24 hours prior to the scheduled range time. Changes, additions, or deletions to the range schedule will be forwarded to 35 OSS/OSOS, who will notify range personnel of all changes to the schedule. USFJ will contact 35 OSS/OSOR directly if unable to notify 35 OSS/OSOS.

2.6.6. Range Cleanup: During scheduled range maintenance and EOD cleanup, adhere to the restrictions below. Electronic warfare emitters on Draughon Range property will not emit while EOD operations are actively being conducted.

2.6.6.1. Overflight Procedures: Overflight is not authorized without the concurrence of the ground party and RCO/ROO approval over areas or portions of ranges during maintenance and clearance operations. This ensures the protection of ground personnel and prevents aircraft damage by fragments from explosives operations. Strict adherence to the procedures outlined below is mandatory.

2.6.6.2. When range maintenance or clearance personnel are present on the range and explosives operations are not planned, aircraft will remain at or above 3,000’ AGL unless a lower altitude is specifically approved by the ground party and RCO/ROO.

2.6.6.3. When explosives operations are planned, aircraft will remain at or above 7,000' AGL to ensure containment of H-6 fill Mk-84 fragmentation.

2.6.6.4. When no personnel are on the range but the range is closed for maintenance or clearance operations, aircraft operations may proceed with no additional altitude restrictions. Only simulated weapons deliveries are allowed IAW applicable directives. Eye safe laser operations are authorized during range clearance closures. All restrictions will be clearly identified in the range schedule.

2.6.7. Bootlegging: During daily range operations flights may "bootleg" range airspace if no other flight is currently on range. A "bootlegging" flight must exit range airspace when any scheduled flight checks in with Draughon Range.

2.7. **Communications:**

2.7.1. Conventional Range: Primary frequency is UHF 365.4. Secondary frequency is VHF 139.2. Emergency frequency is UHF 243.0. Voice call sign is "DRAUGHON TOWER." Two-way communications with Draughon Tower must be established prior to entering R-130 airspace.

2.7.2. Joint Advanced Weapons Scoring Systems (JAWSS):

2.7.2.1. All range missions will be recorded and scored with Improved Remote Strafe Scoring System (IRSSS) and/or Weapons Impact Scoring Set (WISS).

2.7.2.1.1. IRSSS target summary data will be emailed/faxed to the flight lead or represented squadron. A detailed report containing each scored pass can be obtained on request.

2.7.2.1.2. WISS system target summary data will be emailed/faxed to the flight lead or represented squadron. A detailed report can be obtained on request.

2.8. **Procedures:** The following procedures apply to all training on Draughon Range.

2.8.1. Manning: An RCO and two range technicians are required for all scheduled Class A conventional operations. Electronic Warfare operations require an RCO for voice communications and one Electronic Warfare Technician per emitter to be used.

2.8.2. Operational Communications: If an RCO pre-briefing has not been accomplished, the flight lead will check in with call sign, tail numbers, and planned events. The range pre-brief should also include ordnance to be used, type of attack, and number of releases per aircraft per pass, as well as targets to be used. Aircraft will make voice reports in accordance with applicable regulations. Generally, these reports will indicate the aircraft's pattern, position, intention, and armament system status (safe/armed).

2.8.3. Patterns (See Attachment 5):

2.8.3.1. Curvilinear And Pop Patterns: Left-hand turns remaining clear of populated areas. To preclude inadvertent releases, pilots will minimize time with a hot pickle button/trigger to the maximum extent possible. Do not select CCIP/strafe sub-modes until just prior to initiating roll-in to final. Delay as long as practical based on target ID, delivery, and pilot technique. Pilots are authorized right-hand wheel patterns for CAS training following coordination and clearance from the RCO.

2.8.3.2. Strafe: Aircraft executing live low angle strafe (less than or equal to 15 degrees) runs on the scoreable strafe targets will pass across the fluorescent orange run-in tires located on the range boundary. Any fighter/attack aircraft that ejects expended cartridges/links will use a minimum dive angle of 12 degrees for LAS and will delay firing until passing the first pair of tires to ensure all spent cartridges fall within the confines of Draughon Range. Strafe pits 1 and 2 are designated for LAS only. Strafe pit 3 will not be used and strafe pit 4 is designated for High Angle Strafe (greater than 15 degrees) only. Pilots/crews will ensure that guns/cannons are pointed away from inhabited areas prior to selecting Gun/Master Arm or mechanically arming guns/cannons. Pilots are authorized right-hand patterns following coordination and clearance from the RCO. Helicopter strafe passes on the scoreable strafe lanes must comply with all LAS restrictions except the 12 degree minimum dive angle and minimum cease fire ranges. Helicoptor LAS on the tactical target array is permitted as long as the gun-to-target line is between and including 085 to 105 degrees magnetic.

2.8.3.2.1. Live low angle strafe will not be conducted while Combat Survival Training is taking place in the woods.

2.8.4. Recoveries/Safe Escape: Pilots will accomplish the appropriate safe escape maneuver for the event attempted and specific aircraft.

2.8.5. Hung Ordnance Procedures (See Attachment 5): Fly the hung ordnance pattern at 1300 feet MSL until on base leg.

2.8.5.1. Aborting a Pass: Pilots aborting a "hot" pass will state reason after completing safe escape maneuver to preclude any false hung bomb actions.

2.8.5.2. No Spots: If the RCO calls a "no spot," the aircraft attempting to drop must remain over water and attempt to visually confirm bomb status. If overland when notified of a "no spot," avoid populated areas and proceed over water.

2.8.5.3. If the bomb cannot be visually confirmed as expended or secure, consult the Misawa Supervisor of Flying (SOF) and the 35 FW Pilot's Guide and consider either jettisoning the hung bomb IAW para. 2.8.5.4 and/or ceasing further deliveries and flying the Misawa Air Base hung ordnance pattern. Aircraft may continue to drop if the hung bomb condition is resolved. Aircraft with hung ordnance shall inform the RCO and the SOF of intentions and contact Misawa Radar to report hung ordnance before leaving range airspace.

2.8.5.4. Jettison Area: Located over water within the confines of R-130 or beyond 12 NM from shore (international waters) below 5000'AGL. Clear the surface area for boats and watercraft before jettison.

2.8.5.4.1. Jettison Notification Procedures: The pilot shall inform Misawa RAPCON (UHF 317.8) of the intent to use the jettison area. Radar vectors or flight-following to the area shall be provided by RAPCON on request. RAPCON shall not tell the pilot when to jettison.

2.8.5.4.2. Jettison Procedures: Aircrews shall depart MIS TACAN 360 radial at 10 DME at 2,000'AGL (or assigned) on a heading of 090°. 35 FW pilots will

refer to the Selective-Jettison procedures in T.O. 1F-16CM-CL-1.

2.8.5.5. Hung Bombs: With no other malfunctions, hung practice bombs (e.g. BDU-33) do not constitute an emergency. Hung inert heavyweight ordnance and hung/jammed guns do constitute an emergency and will be handled accordingly.

2.8.5.6. Hung Bomb Route: Hold "feet wet" and contact the Misawa Supervisor of Flying (SOF, Callsign "Cardinal," VHF 140.7 or UHF 283.3) prior to RTB. Execute a Hung Ordnance Recovery. Fly the routing depicted in Attachment 5 when VMC at 1,600' and avoid populated areas to the maximum extent possible. For Rwy 10 recoveries, proceed SW over Lake Ogawara and enter a left base outside the "Elephant Cage" for a straight-in landing. Avoid the "Elephant Cage" 1 mile to the northwest of Misawa. For Rwy 28, remain over the ocean and recover to a straight-in landing. If IMC, declare hung ordnance and follow Misawa RAPCON vectors. Advise controllers to attempt to keep you clear of populated areas to the maximum extent possible.

2.8.6. Unintentional/Inadvertent Release: Every effort shall be made to account for all ordnance delivered.

2.8.6.1. Pilot Actions: Pilots shall immediately report any incident involving actual or possible off-range releases (inadvertent or unintentional) to the RCO. Pilots will attempt to mark the spot of the release and the probable impact area.

2.8.6.2. RCO Actions: When notified of a possible off-range release, including a planned or emergency jettison, the RCO shall perform emergency checklist procedures and will immediately relay all pertinent information to the SOF and 35 FW Command Post (35 FW/CP). The RCO will relay information to 35 OG/CC as soon as possible. Command Post will notify the proper authorities immediately. Additionally, RCOs will notify the 35 FW/CP of on-range releases resulting in injury or damage to equipment and property.

2.9. **Night Range Procedures:** Night operations are defined as the time from official sunset to sunrise. All day rules apply to night operations as well as the following restrictions.

2.9.1. Night Weather: Minimum night visibility is 5nm. Helicopters are exempt from altitude, angle and safe escape restrictions and require only 2nm visibility.

2.9.2. Non-Night System Equipped Aircaft: Maximum of 3 aircraft may be in the conventional range pattern.

2.9.2.1. Patterns: Patterns will be a rectangular box or standard radar pattern. Minimum altitude for night operations is 1500' AGL (Draughon Range MSA). Minimum spacing is 60 seconds between deliveries. Pilots will drop only on the conventional target. Max planned dive angle is 45 degrees. Minimum recovery altitudes for dive angles are 4500' AGL >35 degrees, 2000'AGL 20-35 degrees, 1000'AGL <20 degrees. Pilots will accomplish climbing safe escape maneuvers. Pilots will not attempt to air score their bombs. Night strafe (hot or dry passes) is not authorized. Normally, flights should rejoin over the range due to the lack of horizon references to the east (over the ocean). Night rejoins should be above 3500' MSL, weather permitting. Minimum airspeed for dry loft passes is 300 KIAS.

2.9.2.2. Lighting (See Attachment 3): Non-night system equipped aircraft will not drop without operational overt lighting. Pilots will ensure the target is positively identified prior to release. Pilots will ensure position lights are fully illuminated and strobes/ beacons are on.

2.9.2.2.1. Floodlights are positioned at the 5, 6, and 7 o'clock position outside the outer circle of the conventional target and are aimed at the conventional target. The total length of the run-in lights is 2100 feet; all lights do not need to be operational but enough must be operational to ensure aircrew have a clear run-in line to the conventional circle. The RCO has final judgment concerning the appropriate number of functional run-in lights.

2.9.3. Night System Equipped Aircraft: Night systems are defined as Night Vision Goggles (NVG), LANTIRN/LITENING/SNIPER, or NAV FLIR/ATFLIR; infrared Maverick alone does not constitute a night system. Aircraft equipped with night systems will follow non-night system rules while on the range at night with the following exceptions:

2.9.3.1. Maximum Number of Aircraft: Maximum of 4 aircraft may be in the conventional pattern. With RCO and flight lead coordination, additional aircraft may be in the PCA and/or range with positive de-confliction from each additional flight.

2.9.3.2. Lighting: No artificial illumination is required of the target area; however pilots will ensure they are able to positively identify the target prior to weapons release. External lighting will be sufficient to allow the RCO to track all flight members within the pattern. The RCO has the authority to direct which lights aircraft will use while on range. All aircraft on range shall mimic light settings as directed by the RCO.

2.9.3.3. Patterns: Minimum spacing is the same as day procedures. The tactical target array is available for use at night. Scoring can be accomplished if munitions contain a spotting charge. LANTIRN/LITENING/SNIPER aircraft will not go below altitudes specified in MAJCOM/MDS regulations.

2.9.3.4. Strafe: High angle strafe is authorized only for fixed wing aircraft on the center tactical target array. Helicopters may low angle strafe on the tactical target array (firing eastbound IAW para. 2.8.3.2.).

2.9.3.4.1. High angle strafe is also allowed on the HEI HAS target. (HEI only- no TP rounds authorized).

2.10. **Laser And IR Marker Operating Procedures.** All laser and IR marker procedures at Draughon range are IAW AFOSH Standard 48-139 (which imitate those of the American National Standards Institute (ANSI) Z136.1, *American National Standard for Safe use of Lasers),* AFI 11-214, *Air Operations Rules and Procedures,* and AFI 13-212. (Note: IAW AFI 11-214 the use of the "combat" laser mode of a laser designator is restricted to laser certified ranges. Off-range laser emissions are not authorized unless in the "eye-safe" training frequency).

2.10.1. Range Personnel:

2.10.1.1. IAW AFI 13-212, range personnel will have a baseline eye exam before working in the laser hazard environment.

2.10.1.2. IAW AFI 13-212, during laser operations, all range personnel in the Laser Surface Danger Zone (LSDZ) will wear laser eye protection of appropriate optical density. The current Consultative Letter authorizes laser eye protection for range personnel.

2.10.1.3. Lasers will not be operated without the approval of the Laser Safety Officer (LSO) and the RCO.

2.10.1.4. If standing water is present in the LTA, all personnel observing operations shall wear laser eye protection appropriate to the system specification requirements listed in the current consultative letter.

2.10.2. Combat (Non Eye-Safe) Laser Use:

2.10.2.1. Authorization: IAW AFI 13-212 and AFOSH Standard 49-139, Draughon Range (R-130) is authorized for laser use IAW provisions of Consultative Letter (CL), *Laser Safety Survey, Draughon Training Range, Misawa AB, Japan.* This letter is updated periodically and can be obtained through 35 OSS/OSK, 35 OSS/OSOR and **laser.safety@brooks.af.mil.**

2.10.2.2. IAW AFI 13-212, the RCO will acknowledge termination and will record the start and stop time of range periods when laser operations take place.

2.10.2.3. Ground Lasers: IAW 13-212 Ground lasers will not be directed at targets or Hazard Areas where the laser beam will terminate with an ocular hazard beyond the range boundary unless the laser will exclusively transit SUA below FL600 and terminate in space without affecting non-participating satellites.

2.10.2.3.1. A complete listing of allowable ground based laser systems authorized on Draughon Range (and associated restrictions) can be obtained by referencing the CL and can be received by contacting 35 OSS/OSK or 35 OSS/OSO(R).

2.10.2.4. Airborne Lasers: Airborne lasers authorized for use on Draughon Range include the AN/AAQ-28 LITENING II, AN/AAQ-33 ATP SNIPER XR, the ATFLIR (F/A-18) and the AN/AAQ-14 LANTIRN targeting pod. A complete listing of authorized laser systems can be obtained by referencing the CL and can be received by contacting 35 OSS/OSK or 35 OSS/OSO(R).

2.10.2.4.1. Prior to using airborne non eye-safe lasers on Draughon Range, non-Misawa based pilots will view the current Draughon laser training brief within 72 hours of conducting laser operations at Draughon. Laser System Safety Officers/Weapons Officers should contact 35 OSS/OSK (Wing Weapons) or 35 OSS/OSO(R) via email/fax, prior to viewing the briefing for updates to the training brief.

2.10.2.4.2. Ensure Draughon Range has minimum 24 hours prior notice of intent to use lasers. Exception for ship-based users can be made on a case by case basis.

2.10.2.4.3. Laser users will establish two-way radio contact and obtain clearance from RCO/Laser Safety Officer (LSO). The LSO will determine current

environmental suitability for employment of lasers, and ensure the Laser Surface Danger Zone (LSDZ) is clear of personnel. Additionally, the LSO will advise the user if there is standing water present in the laser target areas.

2.10.2.4.4. General Restrictions:

2.10.2.4.4.1. Users should comply with Joint Pub 3-09.1 and Joint Pub 3-09.3 on procedures for laser designation and close air support (CAS).

2.10.2.4.4.2. Calculations used to determine allowed buffer angles and LSDZs assumes ocean waterways, out to three miles, are free of vessels due east of the range coastline. Therefore, range personnel and users must take all reasonable precautions to ensure that the ocean waterways (as described) are clear of vessels prior to employing airborne non eye-safe lasers.

2.10.2.4.4.3. Laser operations must immediately cease if unauthorized personnel are observed in the LSDZ, vessels are determined to be within 3 miles of the coastline, equipment malfunction is observed, target is lost in FOV, or any time laser safety cannot be assured.

2.10.2.4.5. Laser Targets And Target Areas:

2.10.2.4.5.1. All targets are approved for combat laser usage from all headings.

2.10.2.4.5.1.1. Prior to arming combat laser, ensure the range tower has granted clearance for combat laser on your target set.

2.10.2.4.5.1.2. All headings are available (0-360 degrees).

2.10.2.4.5.1.3. Lasing above 23,000’ AGL or below 1,000’ AGL is not authorized.

2.10.2.4.5.1.4. Ensure the lasing aircraft sets a hard altitude while in the wheel and stays inside the max orbit distance listed in Attachment 7.

2.10.3. IR Pointer (“Marker”) Employment: IR pointers referenced in this section are laser command pointers (LCPs) (ACP-2A/2B, GCP-1A/1B/1C, LP-1000, IZLID 100P-A1), ATPs (LITENING,SNIPER XR), and MTS (MQ-1/9). For simplicity, a reference to “IR pointer” is a reference to all devices previously listed.

2.10.3.1. IAW 11-214, Laser Eye Protection (LEP) with side protection must be worn when employing a LCP in the cockpit, where a reflection hazard exists, or during a ground test.

2.10.3.2. IAW 11-214, aircrew will notify ground personnel and other aircraft in the working area prior to employing IR pointer. When required, ground personnel will ensure proper eye protection is in place.

2.10.3.3. Minimum Aircraft To Aircraft Slant Ranges: IAW 11-214, fixed-wing aircraft will adhere to the following minimum slant range separation between IR pointer employing aircraft and other aircraft (assumes no LEPs and no magnifying devices are being used in other aircraft). 1,000 feet slant range for LCP (ACP-2A/2B,

GCP-1A/1B) and LITENING ATP, 2000 feet slant range for MTS and Sniper XR ATP. 3,000 feet slant range for LCP (GCP-1C, LP-1000, IZLID 1000P-A1).

2.10.3.4. Minimum Employment Altitudes And Slant Ranges: IAW 11-214, if all personnel in the area to be designated are wearing LEPs, the minimum IR pointer employment altitude is 1,000 feet AGL for fixed-wing aircraft. In this case, there is no minimum altitude for rotary-wing aircraft LCP employment provided the LCP is not pointed toward any aircraft, person or specular surface (i.e. water, glass, mirrors, reflecting surfaces, etc.).

2.10.3.4.1. IAW 11-214, if non-LEP equipped personnel are in the area to be designated and it is verified that no image-magnifying devices (binoculars, telescopes, etc.) are in use, minimum IR pointer employment slant range is 3,000 feet. If slant range cannot be determined the minimum employment altitude is 3,000 feet AGL.

2.10.3.4.2. IAW 11-214, if non-LEP equipped personnel are in the area to be designated and unable to ensure the absence of personnel using image-magnifying devices (binoculars, telescopes, etc.) in the area to be designated, IR pointer employment is restricted as follows:

2.10.3.4.2.1. LCP (ACP-2A/2B, GCP-1A) and LITENING ATP. The minimum slant range is 10,000 feet. If slant range cannot be determined the minimum employment altitude is 10,000 feet AGL.

2.10.3.4.2.2. MTS. The minimum slant range is 14,000 feet. If slant range cannot be determined the minimum employment altitude is 14,000 feet AGL.

2.10.3.4.2.3. Sniper XR ATP. The minimum slant range is 24,000 feet. If slant range cannot be determined the minimum employment altitude is 24,000 AGL.

2.10.3.5. IAW 11-214, aircrew will make an "IR Pointer Safe" call when IR pointer use is terminated for the mission and the safety cap (handheld LCP only) is in place.

2.10.4. Laser Safety And Reporting: IAW AFOSHSTD 48-139, every incident involving a suspected laser radiation exposure to personnel covered by AFOSHSTD 48-139 (e.g. military and DoD civilian personnel) will be investigated and documented. (NOTE: Aircrew who receive a laser exposure from either friendly or hostile sources should immediately report to the Flight Surgeon's Office (FSO). The FSO will manage and coordinate the event with the MAJCOM, USAFSAM/AFC, 311 HSW/YA and AFRL as appropriate).

2.10.4.1. Individuals exposed will seek medical care, without delay, at their host medical unit emergency treatment facility. THE LASER HOTLINE (1-800-473-3549, this is a 24/7service number, please refer to local dialing procedures) SHOULD BE CALLED ASAP BECAUSE IMMEDIATE INDICATED CARE IS CRITICAL. The immediate supervisor will immediately notify the Unit Commander and Safety Officer or LSO and the Bioenvironmental Engineer. The Bioenvironmental Engineer will notify Wing Safety, Public Health services, Staff Judge Advocate, and MAJCOM medical staff immediately.

2.10.5. No public releases of information concerning laser or IR Marker operations will be made without 35 OSS/OSK, 35 FW/PA, NAF Liaison, 35 FW/CC coordination, and USFJ/service-specific release authorities.

2.11. **Minimum Recovery Altitude:** Users will comply with the applicable AFIs/NATOPS regulations but no lower than 75 feet AGL, whichever is higher.

2.12. **Aircraft Emergency and Radio Failure Procedures:**

2.12.1. Radio Failure (NORDO): The NORDO aircraft will safe all switches and should maintain pattern spacing. The NORDO aircraft will fly near the main tower, rocking its wings. On downwind, attempt contact on the Draughon Range back-up frequency. If contact is made, the RCO will have the rest of the flight switch to the back-up frequency. If radio contact is not made, remain VFR and fly 1000' above the highest pattern briefed rocking wings on final. Fly straight through for each subsequent pass. Squawk 7600 and recover to Misawa. The RCO will notify Misawa RAPCON.

2.12.2. Safety: All flight leads are responsible for the overall safe conduct of the flight. The RCO is responsible for ground safety, and acts as safety observer for all range operations. The flight lead should pay special attention for boats, which may be in the danger area offshore east of the range, or in the channel west of the range. The RCO will ensure all safety precautions contained in this supplement are adhered to and report any violation to the proper authorities in accordance with current regulations.

2.12.3. The RCO may call "KNOCK IT OFF" at any time during missions for safety of flight.

2.12.4. Aircraft Crashes: Range operations will be terminated by the RCO if an aircraft crashes on or near the range complex. The RCO will close the range and direct all aircraft to break out of the pattern. If the crash is in an inaccessible or unknown region, RESCAP aircraft may be requested to stay in the pattern, attempt to pinpoint the crash location, and provide assistance to direct rescue forces to the scene. Misawa RAPCON and Command Post will be contacted by the RCO with accident information.

2.12.5. Controlled Bailout (See Attachment 6): Controlled bailout is over Draughon Range (MIS 360/10 or vectors from RAPCON if IMC) on an easterly heading at or above 2000' MSL.

2.12.5.1. Aircrew will notify SOF of intentions to proceed with controlled bailout. Following SOF notification, SOF and/or aircrew will notify Draughon Range RCO of intentions to proceed with controlled bailout.

2.12.5.2. Following Range notification, the RCO will activate the EMERGENCY ACTION CHECKLIST.

2.13. **Ground Operations/Training:**

2.13.1. Combat Arms M203 Grenade Launcher Training Procedures:

2.13.1.1. Only the approved location will be utilized for M203, Grenade Launcher Training (see Attachment 6).

2.13.1.2. Security Forces will be responsible for scheduling Draughon Range times for M203, Grenade Launcher Training through 35 OSS/OSOS.

2.13.1.3. Security Forces will be responsible for environmental clean-up of the M203 Grenade Launcher Training area to include all expended rounds as well as targets used during training.

2.13.1.4. Security Forces will respond to all Range Control Officer's/Safety Officer instructions/direction.

2.13.1.5. CATM personnel will be trained as unescorted personnel for the safety of their trainees (see paragraph 1.7.1.2).

2.13.1.6. Combat arms training other than M203 is not authorized on Draughon Range.

2.14. **C-130 Procedures (see Attachments 3 and 4):**

2.14.1. Establish a location for the drop zone with range management prior to the start of operations.

2.14.2. Due to environmental conditions, alternate drop zone locations may be approved for operations by the RCO.

2.14.2.1 It is the Airlift Squadron's responsibility to retrieve loads. However, radios, weather data, and 4-wheel drive vehicle support can be coordinated with range personnel. Do not attempt to go beyond the Range Tower without a 4-wheel drive vehicle and familiarity with Draughon Range terrain.

2.14.2.2. Use caution when retrieving loads. Bomb craters may make night retrieval difficult or dangerous.

2.14.2.3. For night drops, loads should be marked with numerous lights to ensure recoverability.

2.14.2.4. If any load, including Standard Airdrop Training Bundles (SATBs) impacts off Draughon Range, notify the RCO immediately. The RCO will notify the 35 FW/CP, 374 AW/CP (225-2536), and the Mission Commander as soon as possible. Every effort will be made by the Combat Mobility Element (CME) team to retrieve all off-range drops. Results of the search will be forwarded to the Drop Zone Control Officer (DZCO) and range operations personnel. In the event of personal or property damage, loads will be undisturbed pending a mishap investigation.

2.14.2.4.1. User accepts responsibility for damage to equipment and property.

2.14.2.4.2 High winds are common at Draughon range. Aircrews must monitor winds closely to ensure airdrops are conducted within limits.

2.14.2.5. Avoid Shimokita range located along the northeastern coast of Honshu. Altitudes vary but can be as high as FL230. This range is activated by Japanese class II NOTAMS and is not covered in the USAF NOTAM system.

Table 1. Coordinates are:

41-21.52'N	141-27.33'E	41-16.22'N	141-24.68'E	41-14.27'N	141-24.50'E
41-14.27'N	141-23.73'E	41-21.52'N	141-26.08'E	41-15.22'N	141-25.16'E
NOTE: Shimokita (Ground-to-Air, Ground-to-Ground Range) is operated by JASDF, normally during the summer months, between 0800-1700L. Contact Misawa Base Operations to determine if the range is active.					

2.14.2.6. Beware of the Draughon Range strafe targets, which look like Raised Angle Markers (RAMs).

2.14.3. IMC Drop Altitude: Plan minimum IMC drop altitudes at 500 feet above the highest man-made obstacle or terrain feature and spot elevation, or 400 feet plus one basic contour interval above the highest depicted basic terrain contour, whichever is highest, within 3 NM either side of the run-in centerline from drop zone (DZ) entry point to DZ exit point. Use the operational minimum drop altitudes in AFI 11-231, *Computed Air Release Point Procedures* if higher. Instrument Flight Rules (IFR) drops and low level routes must comply with Federal Aviation Administration (FAA) exemption 4371C.

2.14.4. IMC: Aircraft will be flown at least 2,000 feet (mountainous terrain) above the highest contour elevation, man-made obstacle, or spot elevation within 10 NM of route centerline. Airdrops will not be accomplished in IMC or through clouds. Aircrew must be visual with the entire drop zone.

2.14.4.1. The computed air release point (CARP) should fall well east of the Range Tower and inside of R-130 for airdrops using the 070-110 degrees MC run-in. To avoid the possibility of airdrops on private property, do not drop if the CARP does not meet these criteria.

2.14.4.1.1. DZ axis is limited to 070-110 degrees M and 250–290 degrees M

2.14.5. Hung Load/Salvo Procedures (See Attachment 2): For 090 or 115 degrees run-ins, maintain drop altitude and DZ heading until over the ocean, for 270 degrees run-in, breakout and turn left, maneuver east of the coast over the water until ready to Salvo. Salvo over the water, within R-130, clear of any ships and notify the RCO prior to, and after SALVO procedures are accomplished.

STEPHEN C. WILLIAMS, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 13-312, *Range Planning and Operations,*

AFI 11-214, *Air Operations Rules and Procedures, 14 Aug 2012*

AFOSHSTD 48-139, *Laser and Optical Radiation Protection Program, 25 Jul 2012*

Adopted Forms

AF Form 847, Recommendation for Change of Publication, 22 Sep 2009

Abbreviations and Acronyms

DZ—Drop Zone

EOD—Explosive Ordinance Disposal

HAS—High Angle Strafe

HEI—High Explosive Incendiary

IRSSS—Improved Remote Strafe Scoring System

LAS—Low Angle Strafe

LCP—Laser Command Pointer

LEP—Laser Eye Protection

NOTAM—Notice to Airmen

NVG—Night Vision Goggles

ORM—Operational Readiness Management

PCA—Positive Control Area

PGM—Precision Guidance Munitions

QAE—Quality Assurance Evaluator

RAPCON—Radar Approach Control

RCO—Range Control Officer

ROA—Range Operations Agency

ROO—Range Operations Officer

RWR—Radar Warning Reciever

SOF—Supervisor of Flying

UXO—Unexploded Ordinance

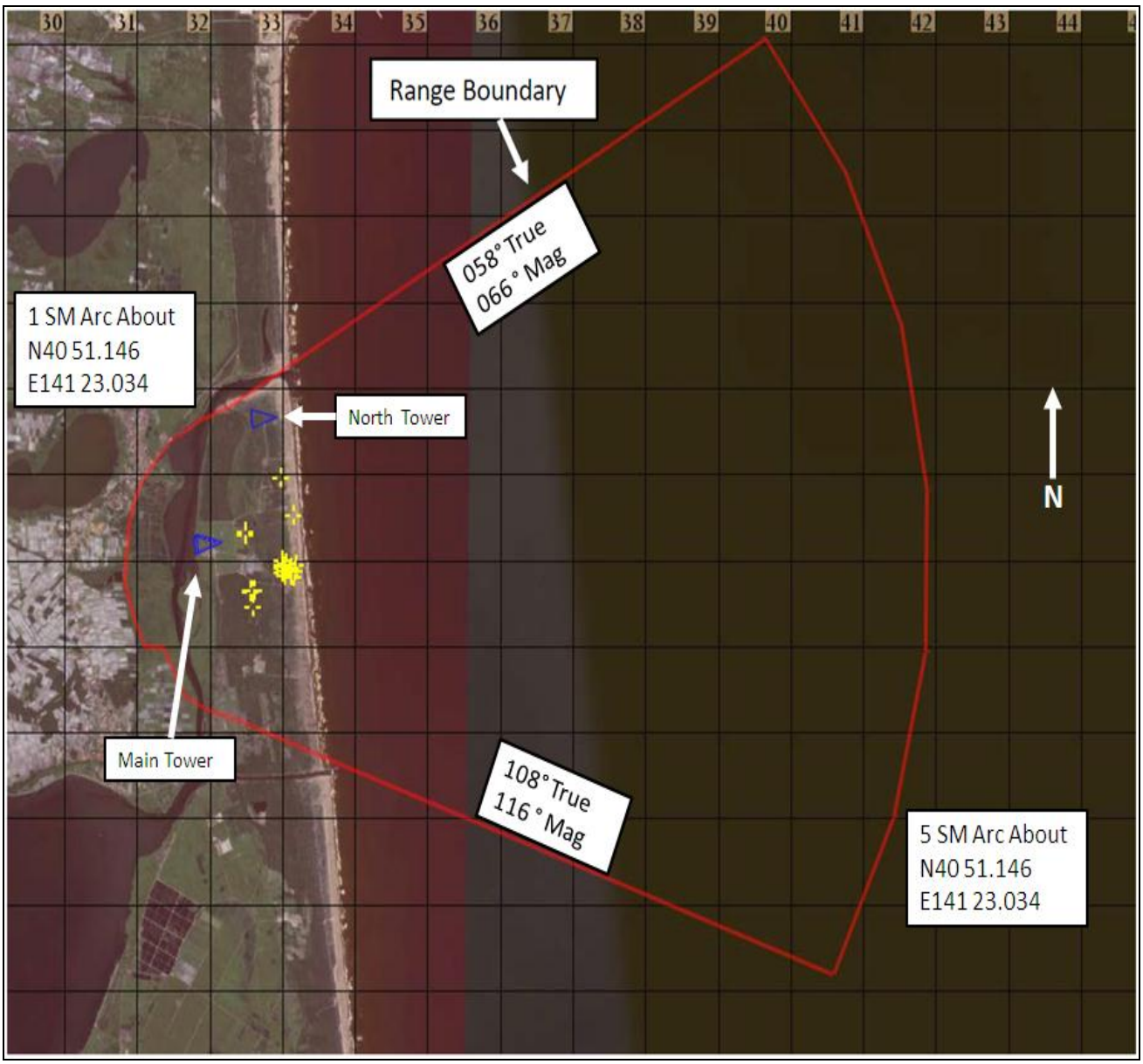
WDZ—Weapons Danger Zone

WISS—Weapon Impact Scoring System

Attachment 2

DRAUGHON RANGE LOCATION

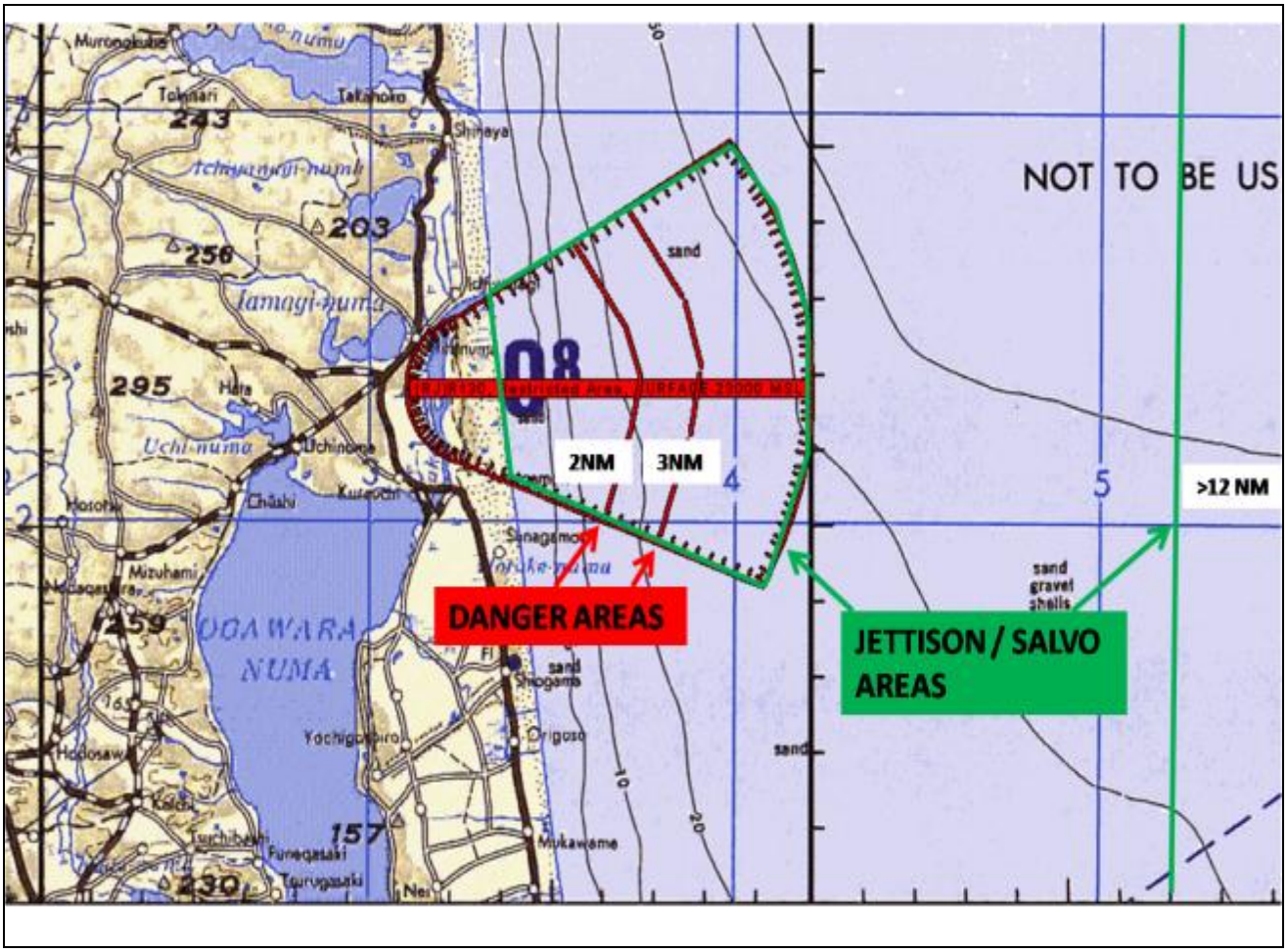
Figure A2.1. Draughon Range Location



Attachment 3

DANGER AREAS / JETTISON / SALVO AREA

Figure A3.1. Danger Areas / Jettison / SALVO Area



Attachment 4

CONFIGURATION/AUTHORIZED DELIVERIES

Figure A4.1. Configuration/Authorized Deliveries (1)

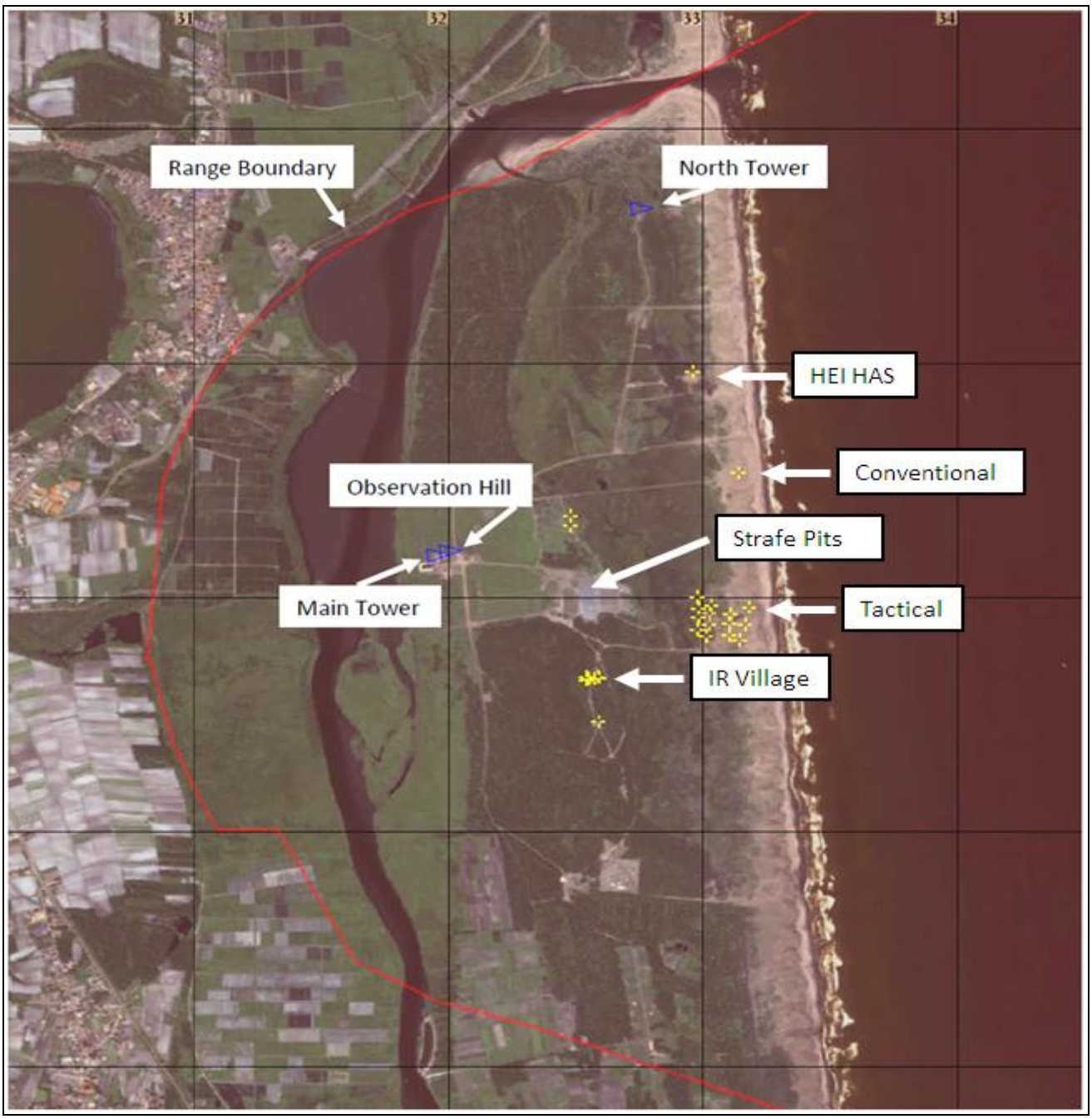


Figure A4.2. Configuration/Authorized Deliveries (2)

Authorized Deliveries			
Conventional	080 CW 120	BDU-33	VLD / 10HD / 10LD / 20HI / 20LD / 30DB / 45HADB / 45HARB / DTOS
Conventional	235 CW 295	BDU-33	30DB / 45HADB / 45HARB
Tactical	065 CW 105	BDU-33 Mk-82/84 Inert[1] 20mm Inert	VLD / 10HD / 10LD / 20HI / 20LD / 30DB / 45HADB / 45HARB / DTOS / HAS[3] / LAS[4]
Tactical	235 CW 295	BDU-33 Mk-82/84 Inert[1]	30DB / 45HADB / 45HARB / LAS[4]
Strafe Pits 1-2	085 CW 105	20mm Inert	LAS[2]
Strafe Pit 4	065 CW 105	20mm Inert	HAS
IR Village	All	Dry Only	Dry Only
JASDF	All	Dry Only	Dry Only
HEI HAS	065 CW 155	20mm HEI	HAS (HEI Only)

[1]Any HD weapon delivered LD must be hard-wired low-drag

[2]Min recovery altitude 500' AGL when pits are frozen or cannot be cleared IAW AFI 13- 212

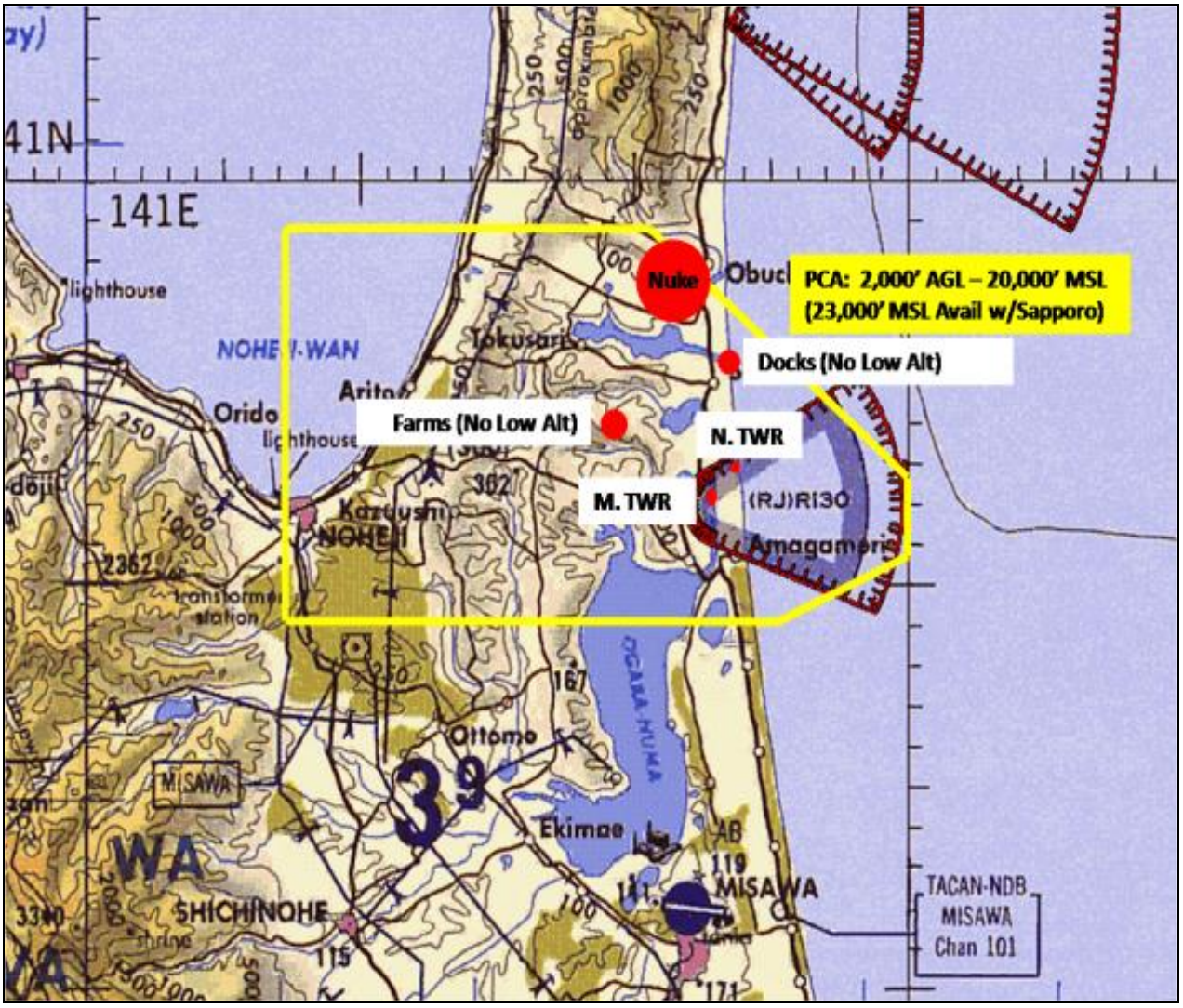
[3]TP (no HEI) allowed on center targets only

[4]LAS on tactical targets will be DRY only

Attachment 5

MISAWA PCA AND NO-FLY AREAS

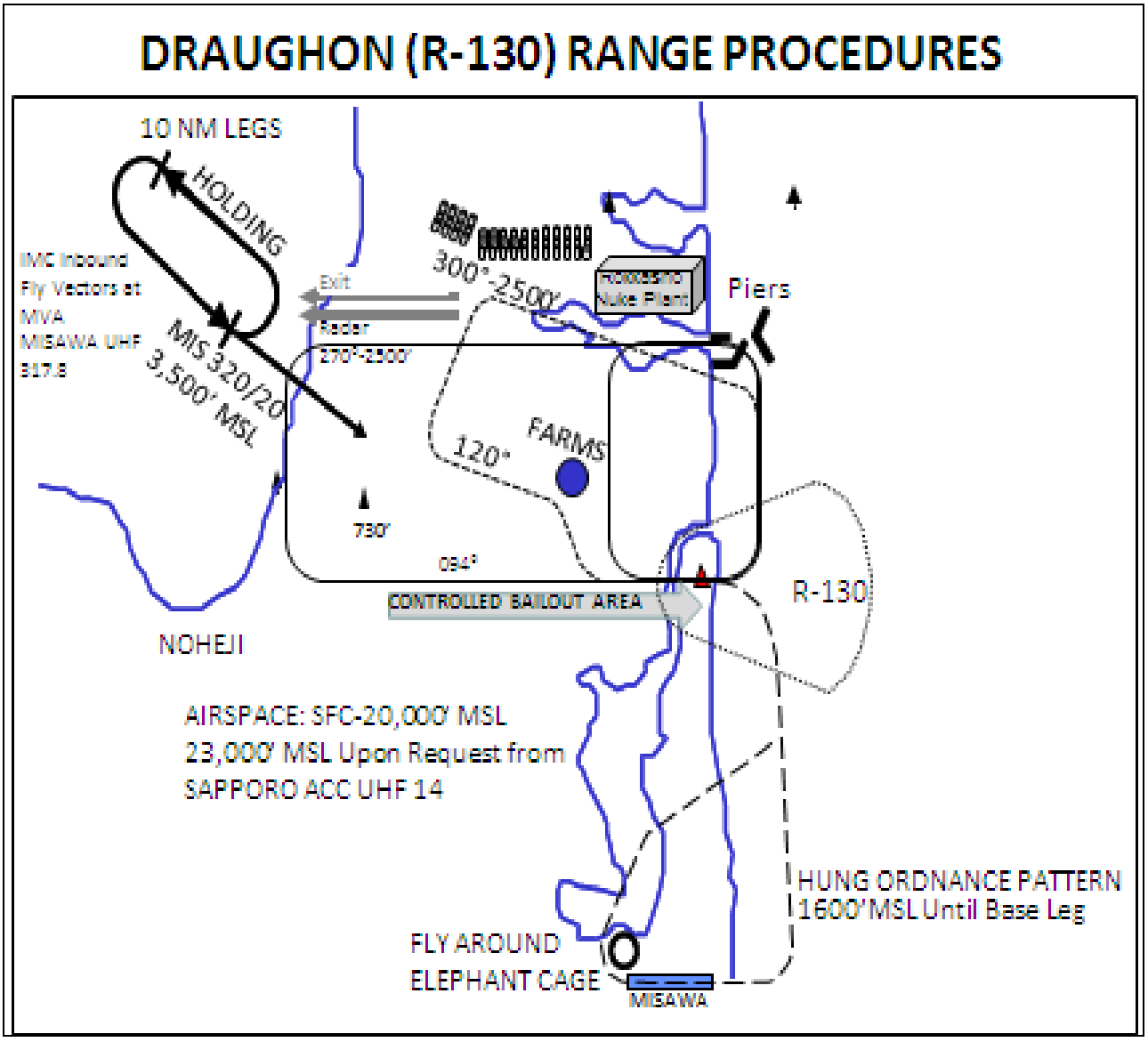
Figure A5.1. Misawa PCA and No-Fly Areas



Attachment 6

PATTERNS HOLDING & HUNG ORDNANCE

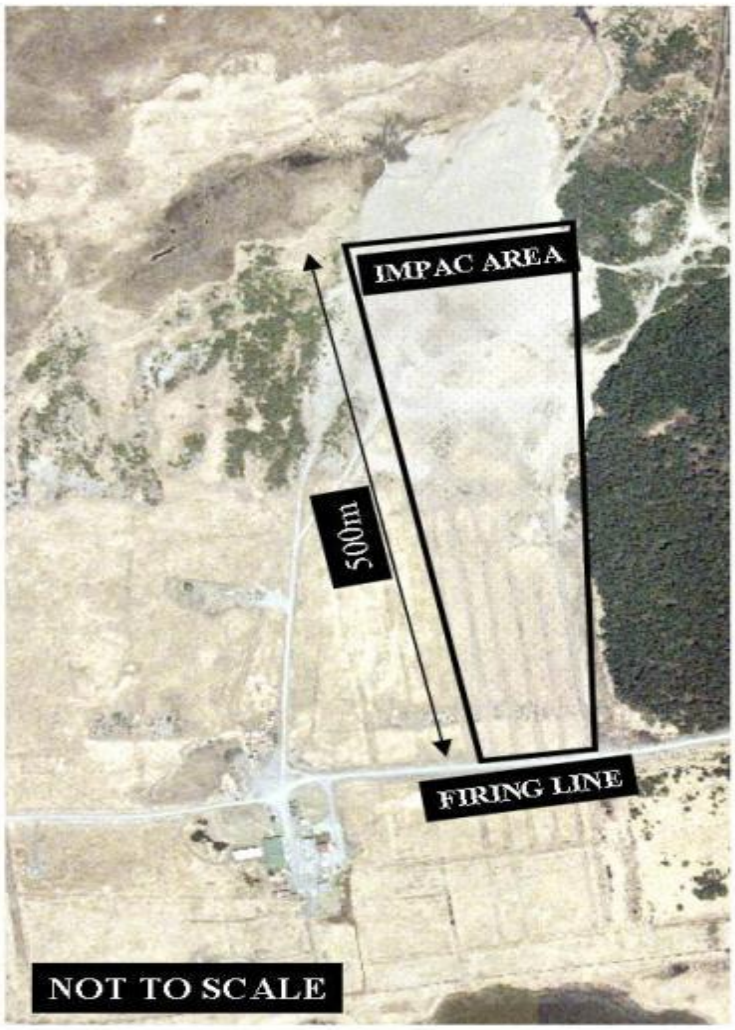
Figure A6.1. Patterns Holding & Hung ordnance



Attachment 7

M203 TRAINING SITE

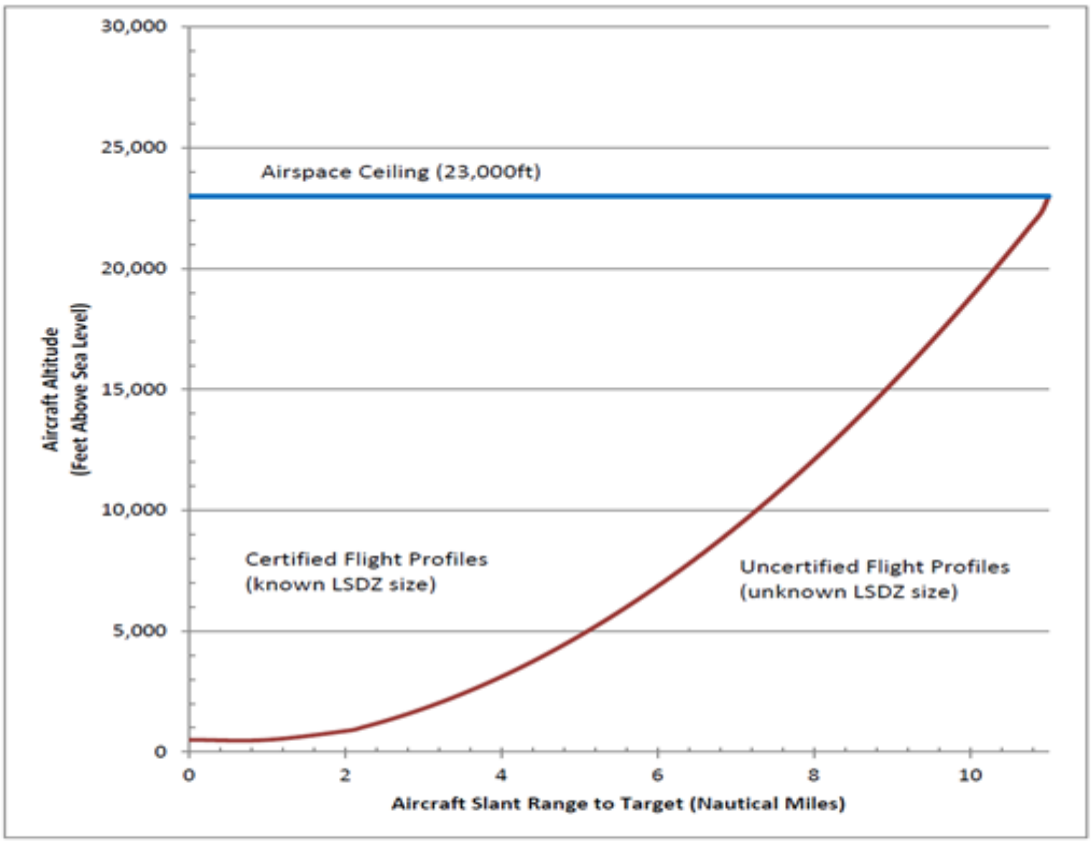
Figure A7.1. M203 Training Site



Attachment 8

DRAUGHON RANGE AIRCRAFT-MOUNTED SYSTEMS LASER SURFACE DANGER ZONES

Figure A8.1. Draughon Range Aircraft-Mounted Systems Laser Surface Danger Zones



Slant Range to Target (NM)	Minimum Safe Lasing Altitude (feet above MSL)	Slant Range to Target (NM)	Minimum Safe Lasing Altitude (feet above MSL)
14	N/A	7	9,300
13	N/A	6	6,870
12	N/A	5	4,810
11	23,000	4	3,120
10	18,810	3	1,780
9	15,270	2	840
8	12,100	≤1	500

Attachment 9

PROPOSED PROCEDURES FOR SCRAPING CONVENTIONAL TARGET

Figure A9.1. Proposed Procedures for Scraping Conventional Target

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

28 Jun 10

MEMORANDUM FOR: 35 CES/CED
35 FW/SE
35 OSS/CC

FROM: 35 OSS

SUBJECT: Proposed procedures for scraping conventional target on Draughon Range.

1. The following are proposed procedures for inclusion into local OIs for clean-up on the conventional target at Draughon Range, due to the accidental release of 105 rounds of 20MM HEI onto the conventional target on 17 May 10. The following procedures were discussed in a meeting on 4 Jun 10 and agreed upon by the 35 OSS/CC, 35 FW/SE and 35 CES/CD that this will be the way ahead in scraping the conventional target and prevent the buildup of BDU-33s.

2. These procedures will be used to assist in mitigating safety concerns related to the clearing of training ordnance on Draughon Range, specifically on the conventional target, while there is a low probability of detonating one of the expected 20MM HEI UXO that may be present, there is still a probability. There is a potential for severe injury, illness or property damage. These risk controls mitigate the risk to an acceptable level. These procedures will be accomplished on a quarterly basis, and may be adjusted slightly based on overall use of the range. With these procedures the accumulation of BDU-33s will not occur.

1. 35 FW EOD personnel will conduct a surface sweep of the conventional target area, marking any BDU-33 safe for removal and appropriately handling any 20MM HEI found. Medical personnel will be on hand to render medical assistance if needed. Both of these activities are normal procedures that are already in-place. Both EOD and Medical personnel will be on site the entire time these procedures are being conducted.
2. Once the target area is cleared of the surface material, the target area will be cleared of all personnel.
3. A military or government civilian member properly trained in the operation of a Front End Loader and dressed in appropriate Personal Protective Equipment, (PPE*), will rake the target area, in reverse, using the tines of the bucket of the Front End Loader for the raking.
4. Once the target area is completely raked, EOD will again conduct a surface sweep of the conventional target.

*PPE will consist of a Flak Vest, Kevlar helmet and ballistic safety goggles.

3. Upon agreement of these procedures by 35 CES/CED, 35 FW/SE, and 35 OSS/CC the conventional target on Draughon Range can be re-opened and the procedures outlined above followed when the conventional target is scraped.

4. Recommend these procedures be revisited annually and agreed upon or incorporate different procedures based on the risk.

5. If you have any issues please feel free to contact me at 226-9133, or via email.

TIMOTHY R. LEWIS, Lt Col, USAF
35 OSS/ADO

1st Ind, 35 CES/CED

Recommend Approve / ~~Disapprove~~

RORY M. STARK, TSgt, USAF
NCOIC EOD Quality Assurance

2nd Ind, 35 FW/SE

Recommend Approved / ~~Disapproved~~

ANTHONY G. RETKA, Lt Col, USAF
Chief, 35th Fighter Wing Safety

3rd Ind, 35 OSS/CC

Approved / ~~Disapproved~~

JOSEPH D. MCFALL, Lt Col, USAF
Commander, 35th Operations Support Squadron

Attachment 10

RISK ASSESSMENT FOR DRAUGHON RANGE

Figure A10.1. Risk Assessment for Draughon Range

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

MEMORANDUM FOR 35 OSS/CC

FROM: 35 FW/SE

SUBJECT: Risk Assessment for Draughon Range

1. A risk assessment was completed by the 35th Fighter Wing Safety Office pertaining to the hazards incurred during Draughon Range clearance procedures around the conventional munitions target. Since this target was contaminated with 20MM High Explosive Incendiary (HEI) rounds, it now poses a greater hazard to personnel performing range maintenance duties. Newly established guidelines will mitigate the majority of the hazards however, the potential for a mishap from unexploded ordnance still exists.

2. The following data was obtained from the Department of Defense Explosive Safety Board, Technical Paper 16:

a. Theoretical Calculated Fragment Range:
HFD [Distance to No More Than 1 Hazardous Fragment per 600 Square Feet] (ft): 61
MFD-V [Vertical Distance of Max Weight Fragment] (ft): 447
MFD-H [Horizontal Distance of Maximum Weight Fragment] (ft): 558

b. Minimum Thickness to Prevent Perforation:
4000 psi Concrete (Prevent Spall): 1.09
Mild Steel: 0.21
Hard Steel: 0.17
Aluminum: 0.47
LEXAN: 2.16
Plexi-glass: 1.13
Bullet Resist Glass: 0.83

3. The following information is based on inputs and utilizing risk analysis tools from AFMAN 91-201, *Explosive Safety Standards*:

a. Likelihood of mishap: Unlikely (over a typical career, a mishap can be expected to occur infrequently within the USAF).

b. Exposure: Rare (<48 man-hours per year)

c. Consequences of a mishap: Negligible (fragments or debris may cause some injuries or damage).

d. Overall Risk Level: Low

4. The steps taken to mitigate risk have been reviewed and are commensurate with the hazards involved. Mandatory personal protective equipment (PPE) has been established for wear during these operations. The front end loader will provide increased shielding to the operator but may sustain minor damage itself from blast or fragmentation.

5. Questions regarding this matter may be directed to 35 FW/SEW at 226-2711/2712.

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Chief, 35th Fighter Wing Safety